

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS, P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO. FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. FILING DATE 12034/US/2 5315 10/828,634 04/21/2004 Wesley Nelson EXAMINER 20686 7590 11/30/2004 GORMAN, DARREN W DORSEY & WHITNEY, LLP INTELLECTUAL PROPERTY DEPARTMENT ART UNIT PAPER NUMBER 370 SEVENTEENTH STREET 3752 **SUITE 4700** DENVER, CO 80202-5647 **DATE MAILED: 11/30/2004**

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/828,634	NELSON ET AL.
		Examiner	Art Unit
	Darren W Gorman	3752	
Period 1	The MAILING DATE of this communication or Reply	n appears on the cover sheet w	ith the correspondence address
THE - Ext afte - If th - If An	HORTENED STATUTORY PERIOD FOR R MAILING DATE OF THIS COMMUNICATION (6) MONTHS from the mailing date of this communication the period for reply specified above is less than thirty (30) days, to period for reply is specified above, the maximum statutory plure to reply within the set or extended period for reply will, by the property of the property o	ON. FR 1.136(a). In no event, however, may a in. a reply within the statutory minimum of thineriod will apply and will expire SIX (6) MOI statute, cause the application to become A	reply be timely filed rty (30) days will be considered timely. NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).
Status			
1)[_	Responsive to communication(s) filed on	•	
2a) <u></u>	This action is FINAL . 2b)⊠	This action is non-final.	
3)	Since this application is in condition for all closed in accordance with the practice und		
Disposi	tion of Claims		
4) 🛛	☑ Claim(s) <u>1-33</u> is/are pending in the application.		
٠ / السبب	4a) Of the above claim(s) is/are withdrawn from consideration.		
5)	Claim(s) is/are allowed.		
	☐ Claim(s) 1-7 and 9-33 is/are rejected. ☐ Claim(s) 8 is/are objected to.		
8)	Claim(s) are subject to restriction a	nd/or election requirement.	
Applica	tion Papers		
9)[\	The specification is objected to by the Exa	miner.	
, —	0)⊠ The drawing(s) filed on <u>21 April 2004</u> is/are: a) accepted or b)⊠ objected to by the Examiner.		
,	Applicant may not request that any objection to		
	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).		
11)[The oath or declaration is objected to by the		
Driority	under 35 U.S.C. § 119		
•	-	roign priority under 35 H S C	\$ 119(a)-(d):or (f)
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
а) All b) Some * c) None of:	mente have been received	
	1. Certified copies of the priority docur		Application No.
	2. Certified copies of the priority docur		
	3. Copies of the certified copies of the	· · · · · ·	r received in this National Stage
	application from the International Bu		transitiod
•	See the attached detailed Office action for a	a list of the certified copies not	received.
Attach			
Attachme	• •	4) [] latan::	Summary (PTO-413)
	ice of References Cited (PTO-892) ice of Draftsperson's Patent Drawing Review (PTO-948		(s)/Mail Date
3) 🔲 Info	rmation Disclosure Statement(s) (PTO-1449 or PTO/S	B/08) 5) Notice of I	Informal Patent Application (PTO-152)
Pap	er No(s)/Mail Date	6)	⁴

Art Unit: 3752

DETAILED ACTION

Drawings

1. The drawings are objected to because in numerous instances throughout the drawings, the reference numbers used do not meet the minimum height requirement of at least .32 cm. (1/8 inch), as set forth in MPEP 608.02, Section V, paragraph (p)(3).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference number "66" appears to designate a middle portion of the anvil in Figures 1 and 3, but

Art Unit: 3752

then designates the "second end" of the "fixed portion 64" in Figure 7, whereas reference number "64" in Figure 1 seems to designate a lower portion of reference number "66".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, wherein the first and second elongated members are formed from a "single piece" of tubing, as recited in claim 14, must be shown or the feature(s) canceled from the claim(s).

The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the piercing portion of the piercing tip being removably connected to the fixed portion of the piercing tip, as recited in claim 15, must be shown or the feature(s) canceled from the claim(s).

The drawings are still further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "hose connection"

Art Unit: 3752

being positioned in the "second member proximate the connection between the first and second members" as recited in claim 29, must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: Reference numbers in the specification designating elements associated with the "anvil" assembly are inconsistent, which renders the description of the anvil assembly confusing. For example, on page 6, starting on line 21, the anvil is described to have a "first end 62" and a "second end 64". Then on page 7,

Art Unit: 3752

on line 2, reference number "64" is used to designate a "fixed first end" of the anvil. Then from page 8, line 20, through page 12, line 7, reference number "62" designates a "first portion" of the anvil. Then, from page 11, line 3 through page 12, line 7, reference number "64" designates a "fixed portion" of the anvil.

Appropriate correction is required.

Minor Claim Suggestions By Examiner

5. The following change(s) are recommended to improve clarity of the claims. The claims have been examined on the merits including the suggested changes below.

In claim 31, line 10, --of the second member-- should be inserted between "first end" and "and the holes" in order to clearly state which "first end" is being recited.

In claim 32, line 4, --for-- should be inserted between "means" and 'connecting".

Claim Rejections - 35 USC § 112

- 6. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
- 7. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites that the "tip" comprises a "fixed portion", and that a "piercing portion" is removably connected to the "fixed portion". This is confusing since, in view of the disclosure and the drawings, there is nothing that suggests that the tip (40) is formed from two

Art Unit: 3752

removably connectable pieces as claimed. As understood by the Examiner, the piercing tip (40) (as a whole and integrally formed piece), "detachably connects to the second end 34 of the second elongated member 30" (see Applicant's specification, page 6, lines 5-7).

For purposes of examination, the claims will be examined as best understood by the Examiner.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1, 17-19, 25, 27, 28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt et al., Patent Publication No. US2002/0179307.

Schmidt shows a piercing hose nozzle (see Figures 1-6, 10, and 11) comprising: first

Art Unit: 3752

(hose connection tube shown in Figures 10 and 11) and second (1) rigid, cylindrical, elongated hollow members each having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection allowing fluid to be communicated from the first member to the second member; a hose connection at the second end of the first member; an anvil (in the embodiment shown in Figures 10 and 11; and described in paragraph [0028]) comprising a fixed portion threaded to the first end of the second member and a striking portion exposed and configured for striking by a sledge, the anvil being coaxial with the second member; and a piercing tip (2) detachably connected to the second end of the second member, the piercing tip having a sharpened end forming an angle of approximately 20 degrees relative to a longitudinal axis of the second member. Schmidt also shows the second member defining a plurality of holes (7) circumferentially spaced around a sidewall of the second member proximate the second end of the second member for directing water outward from the longitudinal axis of the second member.

Claim Rejections - 35 USC § 103

- 10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 11. Claims 3-7, 9, 10, 14-16, 24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al.

Schmidt shows all of the claimed limitations as set forth in claims 1 and 25, as discussed

Art Unit: 3752

above, however Schmidt does not expressly teach the first and second members each being formed of a particular length of 1.5 inch diameter steel tubing, wherein the tubing is .120 inches thick, nor does Schmidt expressly teach the anvil portion and the piercing tip being formed from "hardened steel". Note: Schmidt expressly states that each of the various parts of the piercing nozzle apparatus shown may be constructed from various materials having different shapes, lengths, weights, strengths, etc. (see paragraph [0048], lines 1-4, 12-14, 20-23, and 29-33) depending on the intended use of the apparatus. Further, Schmidt does not expressly teach connecting a "hand guard" to the first member or a connecting a "handle" to the first member and to the anvil. Still further, Schmidt does not expressly teach alternatively positioning the hose connection in the second member proximate the connection between the first and second members.

Regarding the material selection/dimensions of the first and second members as being 1.5 inch diameter / .120 inch thick steel tubing, and the anvil and piercing portions being formed from "hardened steel", it would have been obvious to one having ordinary skill in the art at the time the invention was made to use 1.5 inch diameter steel tubing having a thickness of .120 inches for forming the first and second elongated members of Schmidt, and to form the anvil and piercing portions of Schmidt from "hardened steel", since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Further, regarding the particular lengths of the first and second elongated members, it would have been obvious to one having ordinary skill in the art at the time the invention was made to dimension the length of the first elongated member of Schmidt to be 36 inches and the

Art Unit: 3752

length of the second elongated member of Schmidt to be in the range of 18-36 inches, since a mere change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding the "hand guard" and "handle" recitations, it would have been obvious to one having ordinary skill in the art at the time the invention was made to connect a hand guard to the first member of Schmidt, and to connect a handle to the first member and anvil of Schmidt, since the Examiner takes Official Notice that the use of handles and hand guards are common and well known in hand-held firefighting piercing nozzles in order for a firefighter to safely grasp and swing the device at a target, while providing protection for the firefighter's hands when the device is being used.

Regarding the alternative position of the hose connection as being in the second member proximate the connection between the first and second members, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the hose connection shown by Schmidt at any desired location on the device, such as in the second member proximate the connection between the first and second members, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

12. Claims 2 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al., in view of Mitchell, USPN 5,253,716.

Schmidt shows all of the claimed limitations as set forth in claims 1 and 19, however

Art Unit: 3752

Schmidt does not expressly show the second member being connected to the first member at an angle of 90 degrees, nor does Schmidt expressly show the holes being formed in two circumferential grooves and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove.

Mitchell teaches a piercing hose nozzle comprising: first (40) and second (22, 24, 26) rigid, cylindrical, elongated hollow members each having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection allowing fluid to be communicated from the first member to the second member, the second member connected to the first member at an angle of 90 degrees (see Figure 7; and column 4, lines 38-43), such connection allowing for easier use of the device when it is desired to pierce a structure which has a surface parallel to the orientation of the connecting fire hose (see column 2, lines 33-39). Further Mitchell shows a plurality of holes (20) proximate the second end of the second member for directing water outward from the longitudinal axis of the second member, the holes being formed in two circumferential grooves (58) and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles (A) relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove (see Figure 2), such nozzle hole/groove arrangement improving atomization of the fire retardant liquid while additionally serving to protect aperture exit points from being plugged when the firefighting tool is used to pierce a structure (see column 5, lines 7-14, and lines 41-49).

Art Unit: 3752

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the attachment between the first and second elongated members of Schmidt, to be at an angle of 90 degrees, as shown by Mitchell, thereby allowing for easier use of the device when it is desired to pierce a structure which has a surface parallel to the orientation of the connecting fire hose.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the holes in the sidewall of the second member of Schmidt, to have an arrangement wherein the holes are formed in two circumferential grooves and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove, as taught by Mitchell, in order to improve atomization of the fire retardant liquid and to also protect the holes from being plugged when the tool is used to pierce a structure.

13. Claims 11-13, 26, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al., in view of Relyea et al., USPN, 5,301,756.

Schmidt shows all of the limitations of claims 1, 25, 31, 32, and 33, however a stop (means for limiting distance by which the piercing means passes through the wall) comprising a metal plate connected to the second member at a distance of 12-20 inches from a sharpened end of the piercing tip between the holes and the connection between the first and second members is not expressly disclosed.

Art Unit: 3752

Relyea teaches a piercing nozzle having a stop plate (69) connected to an elongated member (71), the elongated member including a piercing tip and spray unit (67) for spraying fire retardant into a designated area once the piercing tip has punctured through a wall of the area to be sprayed, the stop plate positioned on the elongated member at a desired distance (expressly taught here to be 18 inches) from the piercing point, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall (see Figure 8; and column 8, lines 5-31). Note, other embodiments shown by Relyea, but not discussed in the written description, also have a stop plate mounted on an elongated member of a piercing nozzle assembly (184) (see Figures 18 and 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a stop plate, as taught by Relyea, mounted on the second elongated member at any desired distance from the piercing tip shown by Schmidt, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall, said distance being selected by the user based on intended use of the apparatus (i.e. thickness of the barrier being penetrated, location of the fire, type of fire, etc.).

Regarding the recitation that the stop plate is made from "metal", although Relyea is silent as to what type of material is used to form the stop plate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use metal for forming the stop plate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice.

In re Leshin, 125 USPO 416 (CCPA 1960).

Art Unit: 3752

14. Claims 1-7, 9, 10, 14-25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell, in view of Rutledge, USPN 2,548,621.

Mitchell shows a piercing hose nozzle comprising: first (40) and second (22, 24, 26) rigid, cylindrical, elongated hollow members each having first and second ends, wherein the first end of the second member is connected to the first end of the first member at a connection allowing fluid to be communicated from the first member to the second member, the second member connected to the first member at an angle of 90 degrees (see Figure 7; and column 4, lines 38-43); a hose connection at the second end of the first member; an anvil comprising a fixed portion (39) and a striking portion (38) connected to the first end of the second member, the anvil being coaxial with the second member; and a piercing tip (12) connected (by screw (30)) to the second end of the second member, the piercing tip having a sharpened end (14) forming an angle of approximately 20 degrees relative to a longitudinal axis of the second member (see Figures 1 and 2). Mitchell also shows a plurality of holes (20) proximate the second end of the second member for directing water outward from the longitudinal axis of the second member, the holes being formed in two circumferential grooves (58) and spaced within the grooves in pairs, wherein the holes spaced within the grooves are aligned at 45-degree angles (A) relative to the longitudinal axis, and wherein holes formed in the first groove are offset relative to holes in an adjacent second groove (see Figure 2).

However, Mitchell shows the plurality of holes/grooves being formed in a sidewall (50) of the piercing tip rather than in a sidewall of the second elongated member. Further, Mitchell does not expressly teach the first and second members each being formed of a particular length of 1.5 inch diameter steel tubing, wherein the tubing is .120 inches thick, nor does Mitchell

Art Unit: 3752

expressly teach the anvil portion being formed from "hardened steel" (Mitchell does state that the piercing tip (14) is made from "case hardened steel" (see column 3, lines 43-45). Still further, Mitchell does not expressly teach connecting a "hand guard" to the first member or a connecting a "handle" to the first member and to the anvil. And still further, Mitchell does not expressly teach alternatively positioning the hose connection in the second member proximate the connection between the first and second members.

Rutledge shows a piercing hose nozzle (see Figures 1 and 4) comprising a hollow elongated member (10) having first and second ends, the first end being coaxially connected to an anvil (15) and the second end being coaxially connected to a piercing tip (12), wherein a plurality of holes (14) are formed in and circumferentially spaced around a sidewall of the hollow elongated member.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the plurality of holes shown by Mitchell, in the second elongated member, as taught by Rutledge, since one having ordinary skill in the art would recognize that, should the tip of Mitchell become damaged, replacing the tip would be more expensive since the grooves and holes would have to also be formed in the replacement tip, whereas if the tip were devoid of the holes and grooves (the holes and grooves thereby being formed in the elongated member), a simple conical tip replacement member (without holes and grooves) would be much less expensive to manufacture.

Regarding the material selection/dimensions of the first and second members as being 1.5 inch diameter / .120 inch thick steel tubing, and the anvil portion being formed from "hardened steel", it would have been obvious to one having ordinary skill in the art at the time the invention

Art Unit: 3752

was made to use 1.5 inch diameter steel tubing having a thickness of .120 inches for forming the first and second elongated members of Mitchell, and to form the anvil portion of Mitchell from "hardened steel", since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Further, regarding the particular lengths of the first and second elongated members, it would have been obvious to one having ordinary skill in the art at the time the invention was made to dimension the length of the first elongated member of Mitchell to be 36 inches and the length of the second elongated member of Mitchell to be in the range of 18-36 inches, since a mere change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding the "hand guard" and "handle" recitations, it would have been obvious to one having ordinary skill in the art at the time the invention was made to connect a hand guard to the first member of Mitchell, and to connect a handle to the first member and anvil of Mitchell, since the Examiner takes Official Notice that the use of handles and hand guards are common and well known in hand-held firefighting piercing nozzles in order for a firefighter to safely grasp and swing the device at a target, while providing protection for the firefighter's hands when the device is being used.

Regarding the alternative position of the hose connection as being in the second member proximate the connection between the first and second members, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the hose connection shown by Mitchell at any desired location on the device, such as in the second

Art Unit: 3752

member proximate the connection between the first and second members, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

15. Claims 11-13, 26, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell, as modified and applied above, and further in view of Relyea et al.

Mitchell, as modified and discussed above, teaches all of the limitations of claims 1, 25, 31, 32, and 33, however a stop (means for limiting distance by which the piercing means passes through the wall) comprising a metal plate connected to the second member at a distance of 12-20 inches from a sharpened end of the piercing tip between the holes and the connection between the first and second members is not expressly disclosed.

Relyea teaches a piercing nozzle having a stop plate (69) connected to an elongated member (71), the elongated member including a piercing tip and spray unit (67) for spraying fire retardant into a designated area once the piercing tip has punctured through a wall of the area to be sprayed, the stop plate positioned on the elongated member at a desired distance (expressly taught here to be 18 inches) from the piercing point, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall (see Figure 8; and column 8, lines 5-31). Note, other embodiments shown by Relyea, but not discussed in the written description, also have a stop plate mounted on an elongated member of a piercing nozzle assembly (184) (see Figures 18 and 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a stop plate, as taught by Relyea, mounted on the second

Art Unit: 3752

elongated member at any desired distance from the piercing tip shown by Mitchell, in order to protect the nozzle by limiting the distance the piercing nozzle can penetrate the wall, said distance being selected by the user based on intended use of the apparatus (i.e. thickness of the barrier being penetrated, location of the fire, type of fire, etc.).

Regarding the recitation that the stop plate is made from "metal", although Relyea is silent as to what type of material is used to form the stop plate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use metal for forming the stop plate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Allowable Subject Matter

16. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents to Badberg, Schnepfe, Jr. et al., Gray et al., Ivy, Bakke, McClenahan, Esposito et al., Catanese, Jr., and Smith, are cited as of interest.

Art Unit: 3752

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4901. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Darren W Gorman

Page 18

Examiner

Art Unit 3752

. DWG

November 23, 2004

David A. Scherbel

Supervisory Patent Examiner

Group 3700